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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,489	10/23/2001	Abdul Malik	0152.00420	3233

7590

02/04/2003

Kenneth I. Kohn  
Kohn & Associates  
Suite 410  
30500 Northwestern Hwy.  
Farmington Hills, MI 48334

EXAMINER

THERKORN, ERNEST G

ART UNIT

PAPER NUMBER

1723

10

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/001,489

Applicant(s)

MALIK

Examiner

THEKORN

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1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on April 3, 2002; Oct 15, 2002; and 1/23/03
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on April 3, 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.  
~~If approved, corrected drawings are required in reply to this Office action.~~
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 649
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "etc." is considered to render claim 5 indefinite.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 5-12 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chong (Anal. Chem. 1997, 69, 3889-3898). The claims are considered to read on Chong (Anal. Chem. 1997, 69, 3889-3898). However, if a difference exists between the claims and Chong (Anal. Chem. 1997, 69, 3889-3898), it would reside in optimizing the elements of Chong (Anal. Chem. 1997, 69, 3889-3898). It would have been obvious to optimize the elements of Chong (Anal. Chem. 1997, 69, 3889-3898) to enhance separation.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chong (Anal. Chem. 1997, 69, 3889-3898) in view of either Kataoka (Anal. Chem. October 1, 1999, 71,

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4237-4244) or Kataoka (Chromatographia Vol. 50, No. 9/10, November 1999, pages 532-538) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54). At best, the claims differ from Chong (Anal. Chem. 1997, 69, 3889-3898) in reciting use of a tube. Kataoka (Anal. Chem. October 1, 1999, 71, 4237-4244) (page 4243) discloses in-tube solid phase microextraction has fast operation, simple automation, and low expense. Kataoka (Chromatographia Vol. 50, No. 9/10, November 1999, pages 532-538) (the paragraph bridging pages 537-538) discloses in-tube solid phase microextraction is simple and rapid. Wang (Anal. Chem. 1997, 69, 4566-4576) (Abstract) discloses that sol gel coated columns provide efficient separation for analytes from a wide polarity range. Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses the advanced features of sol-gel chemistry can be effectively applied in an open column. It would have been obvious to use a tube in Chong (Anal. Chem. 1997, 69, 3889-3898) either because Kataoka (Anal. Chem. October 1, 1999, 71, 4237-4244) (page 4243) discloses in-tube solid phase microextraction has fast operation, simple automation, and low expense or because Kataoka (Chromatographia Vol. 50, No. 9/10, November 1999, pages 532-538) (the paragraph bridging pages 537-538) discloses in-tube solid phase microextraction is simple and rapid and either because Wang (Anal. Chem. 1997, 69, 4566-4576) (Abstract) discloses that sol gel coated columns provide efficient separation for analytes from a wide polarity range or because Malik (Advanced Sol-gel Column Technology for

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Condensed-phase Microseparations, 1997, page 54) discloses the advanced features of sol-gel chemistry can be effectively applied in an open column.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chong (Anal. Chem. 1997, 69, 3889-3898) in view of either Kataoka (Anal. Chem. October 1, 1999, 71, 4237-4244) or Kataoka (Chromatographia Vol. 50, No. 9/10, November 1999, pages 532-538) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) as applied to claims 2 and 3 above, and further in view of either Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) or Nakanishi (U.S. Patent No. 5,624,875). At best, the claim differs from Chong (Anal. Chem. 1997, 69, 3889-3898) in view of either Kataoka (Anal. Chem. October 1, 1999, 71, 4237-4244) or Kataoka (Chromatographia Vol. 50, No. 9/10, November 1999, pages 532-538) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) in reciting use of a monolith. Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses that open tubular columns and monolithic columns are interchangeable alternatives to apply the advanced features of sol gel chemistry. Nakanishi (U.S. Patent No. 5,624,875) (column 4, lines 25-27 and column 6, lines 39-46) discloses that sol gel monolithic columns have very low flow resistance. It would have been obvious to use a monolith in Chong (Anal. Chem. 1997, 69, 3889-3898) in view of either Kataoka (Anal. Chem. October 1,

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1999, 71, 4237-4244) or Kataoka (Chromatographia Vol. 50, No. 9/10, November 1999, pages 532-538) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) either because Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses that open tubular columns and monolithic columns are interchangeable alternatives to apply the advanced features of sol gel chemistry or because Nakanishi (U.S. Patent No. 5,624,875) (column 4, lines 25-27 and column 6, lines 39-46) discloses that sol gel monolithic columns have very low flow resistance.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chong (Anal. Chem. 1997, 69, 3889-3898) in view of Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244). At best, the claim differs from Chong (Anal. Chem. 1997, 69, 3889-3898) in reciting use of liquid phase separation technique. Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) (the paragraph bridging pages 4243-4244) discloses solid phase microextraction when combined with liquid chromatography allows continuous extraction. It would have been obvious to use a liquid phase extraction technique in Chong (Anal. Chem. 1997, 69, 3889-3898) because Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) (the paragraph bridging pages 4243-4244) discloses solid phase microextraction when combined with liquid chromatography allows continuous extraction.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) in view of Chong (Anal. Chem. 1997, 69, 3889-3898) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column

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Technology for Condensed-phase Microseparations, 1997, page 54). At best, the claims differ from Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) in reciting use of sol gel. Chong (Anal. Chem. 1997, 69, 3889-3898) discloses sol gel chemistry allows low costs, has the unique ability to achieve molecular uniformity, and has a strong adhesion of the coating to the substrate. Wang (Anal. Chem. 1997, 69, 4566-4576) (Abstract) discloses that sol gel coated columns provide efficient separation for analytes from a wide polarity range. Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses the advanced features of sol-gel chemistry can be effectively applied in an open column. It would have been obvious to use sol gel in Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) because Chong (Anal. Chem. 1997, 69, 3889-3898) discloses sol gel chemistry allows low costs, has the unique ability to achieve molecular uniformity, and has a strong adhesion of the coating to the substrate and either because Wang (Anal. Chem. 1997, 69, 4566-4576) (Abstract) discloses that sol gel coated columns provide efficient separation for analytes from a wide polarity range or because Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses the advanced features of sol-gel chemistry can be effectively applied in an open column.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) in view of Chong (Anal. Chem. 1997, 69, 3889-3898) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) as applied to claims 1-12

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above, and further in view of either Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) or Nakanishi (U.S. Patent No. 5,624,875). At best, the claim differs from Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) in view of Chong (Anal. Chem. 1997, 69, 3889-3898) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) in reciting use of a monolith. Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses that open tubular columns and monolithic columns are interchangeable alternatives to apply the advanced features of sol gel chemistry. Nakanishi (U.S. Patent No. 5,624,875) (column 4, lines 25-27 and column 6, lines 39-46) discloses that sol gel monolithic columns have very low flow resistance. It would have been obvious to use a monolith in Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) in view of Chong (Anal. Chem. 1997, 69, 3889-3898) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) either because Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses that open tubular columns and monolithic columns are interchangeable alternatives to apply the advanced features of sol gel chemistry or because Nakanishi (U.S. Patent No. 5,624,875) (column 4, lines 25-27 and column 6, lines 39-46) discloses that sol gel monolithic columns have very low flow resistance.

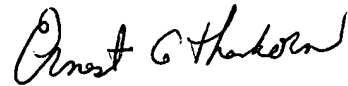
The references of the IDS of November 18, 2002 will not be cited because only the first



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page of every references was submitted.

Any inquiry concerning this communication should be directed to E. Therkorn at  
telephone number (703) 308-0362.

A handwritten signature in black ink, appearing to read "Ernest G. Therkorn". The signature is fluid and cursive, with the first name "Ernest" being more prominent.

**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1723**

EGT/12  
January 23, 2003